

## Who can administer

May be administered by registered competent doctor or nurse/midwife

## Important information

- **Restricted antimicrobial:** It will ONLY be supplied on the direct recommendation of Microbiology/Infectious Diseases/Haematology team
- **Important:** The infusion bottle **contains an excess of drug** - eg patient 50kg, for 60mg/kg dose = 3g. The infusion bottle contains 6g so excess 3g must be removed
- **Hydration is very important for this drug - see under dose for details**
- For **fluid restricted** patients, see SPC

## Available preparations

Foscavir 6,000mg in 250ml bottle (24mg/ml)

**Note:** The 12g/500ml solution for infusion is NOT routinely available in GUH

## Reconstitution

Already in solution

**Dilute further prior to administration (peripheral use)**

## Infusion fluids

Sodium chloride 0.9% or Glucose 5%

## Methods of intravenous administration

**Intermittent Intravenous Infusion (administer using an electronically controlled infusion device)**

**Peripheral line (ref 1,2)**

- **Gloves, protective eyewear and a mask** should be worn by those handling this drug
- **The drug solution needs to be diluted to give a 12mg per ml solution. This can be done in one of two ways:**
- **1: (PREFERRED method)**
  - **Calculate required dose, and withdraw excess drug from infusion bottle and discard it**
  - Administer the volume left in the infusion bottle (the required dose) over at least 60 minutes (120 minutes for doses greater than 60mg/kg) while....
  - **Piggybacking** 1000ml sodium chloride 0.9% through the same catheter/cannula as the foscarnet infusion (at the same rate as foscarnet)- this dilutes the injection solution to the required concentration as it is being administered
- **2: (ALTERNATIVE method)** (ref 1)
  - **Dilute required dose with an equal volume of infusion fluid**

- Calculate the volume of drug solution required for the dose
- Remove a volume of infusion fluid from a 500ml bag to leave an equal volume to the drug solution in the bag- and add in the foscarnet solution. example: patient dose is 4200mg = **175ml** drug solution. Remove 325ml infusion fluid from a 500ml bag (to leave **175ml** in bag)- add the **175ml** drug solution
- Administer the required dose over at least 60 minutes (120 minutes for doses greater than 60mg/kg)

### Central line

- **Calculate required dose, and withdraw excess drug from infusion bottle**
- Administer undiluted over at least 60 minutes (120 minutes for doses greater than 60mg/kg)
- Hydration also required: 500 to 1000ml

### Glass bottle precautions as follows: (ref 3)

- As the drug is supplied in glass bottles, precautions need to be taken during administration to **prevent possible air embolism** - particularly in central line administration.
- Bottles **must be vented** in one of two ways
  - Directly by means of a filter needle into the bottle which goes through the rubber stopper and opens into the air, or
  - Direct air vent on the air inlet of the administration set, located between the drip chamber and piercing pin, it is covered with a bacterial retentive filter to reduce the chance of contamination

## Dose in adults

### Hydration

- **Renal toxicity** can be reduced by adequate hydration of the patient
- **Hydration is recommended with each infusion to reduce renal toxicity - this is in addition to the dilution of the drug as outlined above**
- Hydrate with 500 to 1000ml of Sodium chloride 0.9% at each infusion. In compliant patients, oral hydration with similar hydration regimens has been used. Clinically dehydrated patients should have their condition corrected before initiating foscarnet therapy

### CMV disease induction

- Give 60mg/kg every eight hours **or** 90mg/kg every twelve hours (BNF) for two to three weeks

### CMV disease maintenance

- Give 60mg/kg daily (occasionally 90mg/kg has been given as an initial maintenance dose)
- Increase to 90 to 120mg/kg if tolerated and/or progressive retinitis
- If disease progression on maintenance dose, repeat induction dose

### Mucocutaneous herpes simplex infections unresponsive to aciclovir in immunocompromised patients

- Give 40mg/kg every eight hours for two to three weeks or until lesions heal

### Renal dose adjustments

<b>CMV Induction therapy</b>		
<b>Creatinine clearance (ml/kg/min)(see below for calculations)</b>	<b>CMV Dose in mg/kg every EIGHT hours</b>	<b>HSV Dose in mg/kg every EIGHT hours</b>
<b>greater than 1.6</b>	60	40
<b>1.6 to 1.4</b>	55	37
<b>1.4 to 1.2</b>	49	33
<b>1.2 to 1</b>	42	28
<b>1 to 0.8</b>	35	24
<b>0.8 to 0.6</b>	28	19
<b>0.6 to 0.4</b>	21	14
<b>less than 0.4</b>	Treatment not recommended	

<b>CMV Maintenance therapy</b>	
<b>Creatinine clearance (ml/kg/min) (see below for calculations)</b>	<b>One infusion dose (mg/kg/day)</b>
<b>greater than 1.6</b>	60*
<b>1.6 to 1.4</b>	55
<b>1.4 to 1.2</b>	49
<b>1.2 to 1</b>	42
<b>1 to 0.8</b>	35
<b>0.8 to 0.6</b>	28
<b>0.6 to 0.4</b>	21
<b>less than 0.4</b>	Treatment not recommended

\* a number of patients have received 90mg/kg as a starting dose for maintenance therapy

Creatinine clearance is calculated using the following formula (**this gives the answer in ml/kg/min-** as per table above)

$N * (140 - \text{Age in yrs}) / \text{Serum creatinine (micromol/l)}$

Where N is 1.23 for male patients, 1.04 for female patients (This formula may not be accurate for patients at extremes of body weight- ie obese or very underweight)

## Monitoring

- Monitor serum creatinine every second day during induction therapy, and once weekly during maintenance therapy
- Adequate hydration must be maintained in all patients
- Monitor serum calcium and magnesium levels

## Further information

- Each 250mg bottle contains 1.38g Sodium (equivalent to 69% of the WHO's recommended maximum)

daily intake of 2g)

## References

UK SPC 03/11/2020

1: Injectable medicines- downloaded from <http://www.medicinescomplete.com/> 27/10/2021

2: Injectable Medicines Administration Guide UCL hospitals, downloaded from Medusa 27/10/2021

3:Glass bottle reference - see below